New Approaches to

ENVIRONMENTAL PROTECTION

IN BRITISH COLUMBIA

A LEGISLATION DISCUSSION PAPER

MINISTRY OF ENVIRONMENT, LANDS AND PARKS
PROVINCE OF BRITISH COLUMBIA

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in British Columbia:

A Legislation Discussion Paper

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We Want to Hear From You

EXECUTIVE SUMMARY

Government agencies responsible for environmental protection are facing increasingly complex challenges. Growing understanding of finite ecological limits has prompted the search for a better balance among environmental, economic and community goals.

Agencies that were previously responsible for 'waste management' and 'pollution control' are now refocusing their efforts on *waste minimization* and *pollution prevention* which are more proactive than the traditional 'end-of-pipe' regulatory approach to waste management. Traditional means of protecting the environment through regulation and enforcement are still vital, but they offer only a partial answer. People are demanding a more sophisticated, and more effective, approach to environmental protection.

As part of a five-year action plan, a new legislative framework — tentatively entitled the B.C. Environmental Protection Act (BCEPA) — is planned. *New Approaches to Environmental Protection in British Columbia: A Legislation Discussion Paper* outlines alternative approaches to improve environmental protection in B.C. The paper describes key elements of the proposed legislative model for environmental protection and marks a turning point in the way regulatory agencies approach today's environmental challenges.

The new act will improve the existing Waste Management Act by building on it and incorporating new ways to meet environmental protection goals. In addition to the proposals outlined in this paper, the BCEPA will also contain other measures such as procedural and appeal reforms, improved environmental emergency response, pesticide reforms and enforcement. These aspects are only briefly described here. The pesticides issue is more fully covered in *New Directions in Pesticide Management* (previously released) and the other issues will be more completely addressed in a future discussion paper.

New approaches and new partnerships are needed to meet the environmental challenges of the 1990s. It is proposed that BCEPA should authorize the Minister of Environment, Lands and Parks to enter into agreements and partnerships with key stakeholder groups. It should also delegate authority and provide support to local governments, so that they can assume responsibility for certain aspects of environmental protection, while remaining accountable for their actions.

Proposals to clarify the role of regional environmental protection officials are also advanced.

The recommendations for the new act have a foundation in the '5 Rs' hierarchy for reducing waste — reduce, reuse, recycle, recover, and residuals management— which support a comprehensive pollution prevention strategy. The first three 'Rs' are priority areas for the Ministry — reduce, reuse and recycle. The last two 'Rs', recover and residual management, are viewed as last resort options. The Ministry's goal is to attain zero pollution from waste sources, a concept that still recognizes the environment's capacity to assimilate some wastes. The new act should also emphasize the *polluter pay* principle and include litter control provisions. The BCEPA should provide the Ministry with the authority to prevent pollution, rather than merely to react after a problem occurs.

Integrated decision-making under the BCEPA will help shift the regulatory responsibility to local, provincial and individual sectors. The BCEPA should continue to allow the Ministry to set environmental quality objectives and discharge performance standards, to prohibit certain activities and also to require the development of comprehensive waste management plans. The act should allow Cabinet to designate air or water basin authorities to regulate the total combined discharge of pollutants into a geographically defined area. The act should support the Ministry's past practice of publicizing the degree to which permittees are in compliance with environmental standards.

Issues of fairness in environmental protection should be addressed in the new act, including procedural reforms in areas, such as enforcement, access to information and the opportunities for stakeholder input into new regulations. Appeal reforms, mediation, and 'whistle-blowers' protection' should also be considered for the proposed legislation.

The new legislation should allow the Ministry to maintain strict controls on the use of toxic substances that are potentially harmful to the environment. It should also address the need to reduce and, in some cases, eliminate the use of toxic substances.

It is expected that new legislation dealing with contaminated sites will be introduced through amendments to the Waste Management Act in advance of the new BCEPA and this legislation would be carried into the new BCEPA.

The BCEPA, in conjunction with a revised Water Act, should ensure enhanced protection of water quality. To this end, the Ministry should also be given new authority to regulate non-point source pollution.

The legislation should accommodate other approaches to environmental management such as the use of market-based incentives and life-cycle management for products and packaging.

Readers are invited to comment on the specific recommendations and policy suggestions contained in this discussion paper. A Reader Response Sheet is provided at the end of the paper. Other public consultation measures will be announced in the future, to ensure ample opportunity for you to help shape British Columbia's Environmental Protection Act.

1
INTRODUCTION

Many recommendations have been made for reforming the way the Ministry of Environment, Lands and Parks addresses the challenges of sound environmental management. British Columbians are demanding more than after-the-fact *waste management* or *pollution control* legislation. They want to protect the environment.

Helping to find solutions to environmental problems is a key challenge to all levels of government in Canada. This is particularly important in British Columbia, where our prosperity is so closely linked to a healthy environment. Environmental problems involve a complex interrelationship between ecological, institutional, social and economic forces. Effective government protection of the environment today requires a balance of regulation, education, selective spending, and market-based incentives. Long-term solutions also require a commitment by individuals, governments, and industry to modify activities that negatively affect our environment.

An environment that is truly sustainable will require significant changes in the behaviour of governments, industries, and consumers:

- Government structures, policies and programs should change to encourage activities that meet the need for an environment that can support future generations.
- Industry and business should take into account the environmental impact of their decisions over a longer period of time than they have to date, including the life-cycle management of the products they produce.
- Individual consumers should reduce their use of products and energy which are generated at the expense of the environment.

Government should not dictate what products industry should produce or how industry produces them. It should not dictate individual consumption habits. However, government can encourage individuals and industry to conduct their affairs in a manner to achieve a sustainable environment that is capable of permitting continued growth. The proper balance can be achieved by government creating appropriate incentives, establishing environmental standards and enforcing compliance with them, while ensuring that the marketplace — consumers and industry alike — have the freedom to reach environmental objectives in the most appropriate way.

Without statutory renewal, however, many of the initiatives cannot be implemented in British Columbia. The Waste Management Act and its forerunner, the Pollution Control Act, are now almost a generation old. They are based on outdated 'end-of-the-pipe' regulatory approaches. The time has come for new approaches and enhanced legislative support.

The purpose of this discussion paper is to describe the possible framework, and the main features of a comprehensive new B.C. Environmental Protection Act (BCEPA). This discussion paper has two distinct elements. It has been written primarily as a 'white paper'. In most instances, specific recommendations for new legislative provisions are proposed, accompanied by policy justifications. In a few instances, no firm policy recommendations have been made. In all cases, policy recommendations will undergo a thorough public review before legislative recommendations are made to government.

An effort has been made to distinguish clearly between strong policy recommendations, which are written **in bold type** and issues where the desirable policy direction is less clear, which are written *in italics*. The emphasis throughout is on changes which would require statutory reforms, rather than on those policy changes that can be made without new legislation.

The reforms proposed in this paper cannot be evaluated in isolation. They will dovetail with other provisions of the Ministry's proposed BCEPA, such as an enhanced administrative and enforcement framework, enhanced mechanisms for public involvement, and state of the environment reporting requirements, which will apply to all areas of Ministry responsibility.

Although they are recognized as vital to a better environmental protection strategy in British Columbia, these other proposed reforms will be considered more closely in another discussion paper. The *Environmental Protection Divisions's Five Year Action Plan* and other Ministry discussion papers also complement this discussion paper. Finally, the provisions of the BCEPA will also have links to other Ministry legislative initiatives, notably the proposed new Water Management Act.

2
General Principles

The Province, through the Ministry of Environment, Lands and Parks ,is committed to: shared responsibility and partnerships in reaching the goals of environmental protection and sustainability; consultation and discussion; finding new approaches, technologies and solutions; and strong representation and advocacy for environmental protection and enhancement. These commitments have been discussed in a wide variety of publications released by the Ministry.

This discussion paper builds on these commitments and incorporates such key principles as partnerships and local responsibility, waste reduction, 'polluter pay' policies, pollution prevention, and integrated approaches to decision-making.

Specific strategies and tools to support these principles are needed to get the job done. These and other general principles should be the building blocks of the new legislation; they are discussed below.

2.1 Agreements

Any comprehensive legislative response to the problems of pollution in B.C. is affected by the division of authority under the Canadian constitution. When Canada was created, the environment was not perceived as a subject for legislators' attention. New constitutional arrangements are now being forged in Canada, and the division of legislative responsibility for environmental protection may be affected. Regardless of the outcome of the present constitutional deliberations, there is a need and public expectation for governmental cooperation in the field of environmental protection. The current Ministry of Environment Act allows the Minister to enter into agreements with the federal government and other provincial governments or their agents. This should be expanded to encompass the possibility of agreements with many other entities in order to achieve environmental protection goals.

Recommendation 1:

The BCEPA should explicitly provide authority for the Minister of Environment, Lands and Parks, with the approval of the Lieutenant-Governor in Council, to enter into agreements with the federal government and other provincial and territorial governments, neighbouring states, and local governments; native bands, tribal councils, and other aboriginal organizations; schools, hospitals, and other public institutions; public interest groups; and corporations.[1]

Such a provision would also provide legislative support for the new partnership and stewardship agreements with industry and consumers that are recommended below. All sectors of society — governments, industry, and consumers — must share responsibility for environmental protection.

Ontario legislation provides a useful illustration of a stewardship approach to environmental management. The Conservation Land Act[2] states:

> The Minister, subject to the approval of the Lieutenant-Governor in Council, *may establish programs* to recognize, encourage and support the *stewardship* [of conservation land].

This notion of ministerial programs to foster stewardship is part of several ongoing Ministry initiatives, such as the Partners in Recycling Program. Getting waste producers to take responsibility for their products, both before and after they become a waste problem, is a major thrust of modern waste management.

Recommendation 2:

The BCEPA should enable the Minister to establish programs and enter into agreements, with the approval of the Lieutenant-Governor in Council, to recognize, encourage and support the stewardship of products and wastes.

2.2 Equivalency with Federal Legislation

Under the Canadian Environmental Protection Act (CEPA),[3] 'equivalency agreements' may be negotiated with the provinces. Regulations enacted under the federal act would not apply in a province if a written agreement was reached recognizing provincial pollution laws and enforcement practices as equivalent to, or more stringent than, CEPA regulations.

Recommendation 3:

In drafting the BCEPA, the existence of equivalency provisions with federal statutes should be addressed, so that unnecessary duplication of federal/provincial services can be avoided and maximum harmonization of regulatory requirements achieved.

2.3 Responsibility and Accountability

The current Waste Management Act already features considerable decentralization of authority. Regional managers are the key decision-makers under the statute. Nevertheless, the act also anticipates the possibility of Cabinet exercising complete authority over wastes and issuing permits 'in the public interest', taking into account considerations beyond those that officials under the act might consider.[4] The act provides clear powers and responsibilities to regional managers, directors, and Cabinet. However, the role of the Minister of Environment, Lands and Parks and the role of regional directors needs to be clarified. The role of the Ministry in relation to other agencies having authority over matters which can have an impact on the environment should also be clarified.

Recommendation 4:

The entire chain of authority and accountability of officials in the Ministry should be addressed and clarified in the BCEPA. Where there is conflicting decision-making authority with other provincial legislation concerning environmental protection, the BCEPA should have the over-riding authority.

There is a confusing mix of overlapping responsibilities and requirements between different levels of government under the current legislation. For example, the Minister approves waste management plans and may make changes and add requirements as considered appropriate. In other instances, regional districts or municipalities may, or may not, prepare liquid waste management plans.

Some amendments to the Waste Management Act are planned for the 1992 legislative session to provide some clarification to the planning requirements for municipal solid and liquid waste. These provisions would be carried forward into the new BCEPA.

For planning at the local government level to be effective, the technical and scientific expertise of Ministry officials in Victoria or regional offices should be made available. Also, the planning responsibilities to be imposed by the BCEPA should be coordinated with other planning responsibilities conferred under other Ministry legislation.

An expanded planning approach to environmental protection, however, must not be an excuse for endless delays and lingering non-compliance. Municipalities and regional districts cannot be allowed to avoid their environmental responsibilities, merely by a failure to implement the plans mandated by the act. An array of 'carrots and sticks' must be available to environmental protection officials to help ensure compliance.

Recommendation 5:

The BCEPA should clarify the obligation and authority for designated local governments to prepare a variety of plans to address municipal solid waste, liquid waste, air quality management, biomedical waste, and environmental emergencies, with approval required by the Minister. Moreover, such planning should refer specifically to pollution prevention and apply to transportation policy and energy policy as well, which may be of particular significance in air management. At the same time, the act should provide mechanisms to generate the necessary funding to enable local governments to undertake this planning and implementation including associated public consultation.

The Ministry is moving increasingly towards integrated management. This was reflected by the recent creation of the Integrated Management Branch within the Fisheries, Wildlife and Integrated Management Department of the Ministry of Environment, Lands and Parks. The trend to integration should also be entrenched in the pollution prevention portions of the BCEPA.

An integrated management approach to pollution prevention will require coordination between various government agencies and building partnerships with industry and consumers. Environmental protection responsibilities in some instances may be shifted to different agencies.

For example, under the Waste Management Act, the Greater Vancouver Regional District has been delegated authority to deal with air pollution control within its boundaries, and in this context a district director exercises all the power of a regional

manager. Authority for some other aspects of environmental protection might also be exercised more efficiently by other levels of government.

Recommendation 6:

The BCEPA should provide statutory authority for the Ministry to assign certain powers to local governments, other ministries, and federal authorities.

As a greater degree of regulatory autonomy is conferred upon aboriginal governments in British Columbia, the Ministry may likewise wish to delegate responsibility to these governments. Even without specific self-government agreements between the provincial and federal governments and aboriginal organizations, it may be considered that broader administrative powers should be conferred.

Recommendation 7:

The BCEPA should provide statutory authority for the Ministry to confer jurisdiction to native bands, tribal councils or other aboriginal organizations, to enter into co-management agreements for environmental protection both on and off native lands, and for reciprocal monitoring and enforcement.

This trend to assign more responsibility to local governments for the planning and delivery of environmental protection has also occurred in many U.S. states and Canadian provinces. With responsibility, however, comes accountability. Of course, this is not an issue unique to environmental protection. The B.C. Municipal Act, the School Act, and the Hospital Act all enable Cabinet or the Minister, in certain instances, to have by-laws passed or decisions made which normally would be made by local authorities, school boards, or hospital boards.

For example, the Minister of Health may require that hospital by-laws or rules be:

> "revised in a manner satisfactory for him in order to meet changing conditions and policies, and to provide for greater uniformity and efficiency in all matters concerning the administration and operation of hospitals."[5]

This is an example of a function, which has been delegated to local bodies, being controlled by the Ministry in particular circumstances. Similarly, notwithstanding that boards of school trustees are generally responsible for education, the Minister may from time to time issue a statement of educational policy for British Columbia.[6]

Recommendation 8:

Under the BCEPA, the Minister should be able to set criteria for environmental planning to be undertaken by local governments and for the approval of their plans, and also to issue policy statements and the like, binding on local governments, in order to achieve greater accountability.

Ontario's amended *Planning Act*[7] offers guidance to local governments, which are required to develop plans under that legislation. The act provides that:

> 2. The Minister, in carrying out his responsibilities under this act, will have regard to, among other matters, *matters of provincial interest* such as:
>
> (a) the protection of the natural environment (. . .)
>
> (f) the coordination of planning activities of municipalities and other public bodies;
>
> (g) the resolution of planning conflicts involving municipalities and other public bodies;
>
> (h) the health and safety of the population.
>
> 3. The Minister, or the Minister together with any other Minister of the Crown, may from time to time issue policy statements that have been approved by the Lieutenant Governor in Council on matters relating to municipal planning that in the opinion of the Minister are of provincial interest.

If plans prepared at the local level are not acceptable to the Minister, he or she can refuse to approve them or make modifications. In addition, the act provides the Minister with authority to issue policy statements.

Recommendation 9:

To help increase local governments' accountability for the environmental protection responsibilities assigned to them, the BCEPA should contain provisions for the Minister to issue province-wide minimum standards and policy statements on the protection of the environment which, in the opinion of the Minister, are in the provincial interest. As well, local governments should be required to provide the Minister with annual reports on their implementation of the requirements of the BCEPA.

Section 2 of the Environment Management Act[9] currently contemplates the Minister preparing and publishing "policies, strategies, objectives and standards for the protection and management of the environment," as well as specific "environmental management plans" for a variety of matters, including waste management and air management. Although they are not always directly binding, these instruments can be used as bench-marks in environmental enforcement and for other purposes.

Similarly, section 8 of the Quebec Pesticides Act[10] provides as follows:

> The Minister of the Environment shall devise and propose to the Government programs fostering a decrease in and the rationalization of the use of pesticides; he shall direct and coordinate the implementation thereof.
>
> The objects of the programs shall be
>
> (1) to promote the analysis, assessment and control of the effects of the use of pesticides on humans and other living species as well as on the environment and property;
>
> (2) to contribute to the development of alternatives to the use of pesticides, such as biological or integrated pest control, and to promote the use of such alternatives.

The act then goes on to empower the Minister to coordinate research, and to compile, analyze and publish available statistical data about pesticides. It also states that the Minister may:

> *"devise, foster, and ensure the implementation of plans and programs* to train specialists, educate and inform the public and promote awareness in the field of pesticides, and make, according to law, *any agreement* with any government, government agency or other person to facilitate the carrying out of this Act".[11]

The act contemplates that a 'Pesticide Management Code' will be prescribed by the government and everyone who works in any way with pesticides, pesticide containers, or equipment must comply with this code. These measures are in addition to more conventional permitting requirements.

The BCEPA could increasingly embrace this regulatory approach, so long as compliance with environmental standards is not jeopardized.

Recommendation 10:

The BCEPA should include powers to devise, foster and ensure the implementation of plans and programs for environmental protection and to formulate environmental quality criteria, objectives, guidelines, standards and codes of practice.

2.4 Role of Regional Directors

The current Ministry legislation does not mention the role of the Ministry's regional directors, even though they are the senior officials in each region of a very decentralized program. The Ministry regional director is well placed to serve as the link between local and provincial authorities and to assist with the resolution of issues that involve conflicts between environmental protection and resource uses.

Recommendation 11:

The act should give Ministry regional directors discretionary authority either to mediate disputes concerning environmental protection in their regions, or to appoint someone skilled in alternative dispute resolution techniques, if the parties feel that such a step could be productive and could avoid a formal appeal. It should likewise delegate to Ministry regional directors explicit authority to 'sign off' the several planning processes to be undertaken by local governments, and to resolve disputes between local governments in this context.

It is expected that the options for Regional Directors to facilitate alternate dispute resolution techniques will be reviewed further in the forthcoming discussion paper on the general provisions of the BCEPA.

Another example of the potential role of Regional Directors concerns air pollution in the lower mainland and other areas of the province. Although the present legislation delegates to the GVRD responsibility for air contaminants, municipalities such as Chilliwack and Abbotsford might be bearing the brunt of pollution generated in the GVRD. Under current arrangements, residents of these other municipalities have no involvement in decisions made by the GVRD that could affect their health and environment.

Recommendation 12:

The BCEPA should provide discretionary authority for the Minister to create air management boards. The BCEPA should require the chairperson of boards consisting of more than one regional district to be approved by the Minister, and Ministry regional directors or their designates will be empowered to serve on these boards.

2.5 Waste Hierarchy

For plants and animals, there is virtually no such thing as 'waste.' The wastes or remains of one form of life are food or nutrients for other life forms. Sooner or later, everything is recycled through natural processes. Our challenge is to imitate these natural processes in our economic systems and life-styles. There must be a legislative foundation to help meet this challenge.

The BCEPA should contain the five 'Rs' hierarchy as the foundation of environmental protection legislation. The first three 'Rs' are priority areas for the ministry:

- **Reduce** The act should provide a policy framework for environmental education, economic/market incentives and regulatory powers, to promote conservation measures so that fewer, and less hazardous, raw materials, products, and energy are consumed.

- **Reuse** Rewards and penalties should be provided in legislation so that products and packaging can be reused without the need to remanufacture them. For example, rather than creating 'waste' by consuming convenience products, reusable products should be promoted. In some circumstances, Ministry officials will have to work closely with those of other ministries, to ensure that reusable products meet health and safety requirements as well.

- **Recycle** Recycling should go well beyond the 'blue box' program for newspapers, glass and metals now offered in many communities. Many other 'waste' materials, both at the household and industrial levels, can be collected and used to manufacture new products. A recycling strategy should be devised which compliments a new beverage container strategy and promotes producer life cycle responsibility for products and packaging.

The last two 'Rs' are viewed as last resort options:

- **Recover** After collection, useful materials, and even energy, can be extracted from waste, optimizing the benefits of the waste reduction program. In the recovery of energy from waste, difficult trade-offs must often be considered. For example, is the benefit of energy recovery and waste destruction warranted if even small quantities of toxic residuals are generated as a result?

- **Residuals Management** Only when materials are no longer suitable for reuse or cannot be recycled do they become 'waste' in the conventional sense. These final waste materials must be disposed of in the safest and most efficient manner possible. Legislative reform to address all types of waste — solid, liquid, industrial, air emissions and special and toxic chemicals — must be based on the principles of a strategy for reducing, reusing, recycling, recovering, and, only as a last resort, managing residues.

Sometimes, a sixth 'R' is included in the list. 'Remediation' or 'restoration' are sometimes of critical importance, particularly in cases of contaminated sites clean-up and environmental emergencies.

Recommendation 13:

The BCEPA's core principle should be that the preferred order for addressing wastes is to reduce, reuse and recycle. Recovery and residuals management should be permitted only after these higher order options have been considered.

In addition to the present limited emphasis on 'waste' management, the Ministry needs more general powers to regulate the use of products and packaging which may create environmental damage and for which current permitting and assessment may be inadequate. The Minister currently has discretionary authority under the Environment Management Act to make an environmental protection order regarding any work, undertaking, product use or resource use that has or potentially has a detrimental environmental impact.

Recommendation 14:

The BCEPA should provide discretionary authority for the Minister to issue an order to control the application or use of any potentially harmful chemical products and environmental practice in British Columbia. Such an order should supersede any relevant approvals contained in other legislation.

2.6 Zero Pollution Objective

Calls for 'an ecosystem approach' to toxic pollution or 'life cycle management' have been increasingly heard in recent years. When the Great Lakes Water Quality Agreement was revised in 1978, it was based upon two guiding principles: an ecosystem approach and zero discharge of persistent toxic substances.[15] American and Canadian governments promised to "eliminate or reduce to the maximum extent practicable the discharge of pollutants into the Great Lakes System." They also stipulated that the discharge of all persistent toxic substances is to be "virtually eliminated." According to the agreement, "The philosophy adopted for control of inputs of persistent toxic substances *shall be zero discharge.*" Ontario's Municipal-Industrial Strategy for Abatement (MISA) and its Clean Air Program (CAP) both state their aims to be the virtual elimination of persistent toxic substances.

For waste management in general, the BCEPA will have a goal of zero pollution. The goal of zero pollution recognizes that the environment is capable of assimilating some wastes. If properly managed, some kinds of waste discharges will not cause pollution problems.

Recommendation 15:

The BCEPA should make 'zero pollution' of the environment an explicit goal of the Ministry. Legislative provisions should allow the Minister to set targets and deadlines for the reduction of certain pollutants, such as municipal solid waste, and for the elimination of certain toxic chemicals designated by regulation.

2.7 Polluter Pay Principle

All over the industrialized world, the *polluter pay* principle has attracted a strong following. Make polluters 'internalize' the costs of polluting, economists consistently advocate. British Columbia has been a leader in this field. For example, the Litter Act,[16] which established refund requirements for certain beverage containers, was the first statute in Canada to contain such a requirement. Specific recommendations for action to implement this principle are contained in Chapter 10.

Recommendation 16:

The BCEPA should be written in a way which strongly reflects the polluter pay principle.

3
Waste Minimization and Pollution Prevention

3.1 Status Quo

The Ministry currently regulates waste discharges under the Waste Management Act. Any industry, trade, business, municipality or regional district that discharges waste must have a permit, approval or similar authorization. The act also covers the storage, disposal and transport of special wastes.

The basic scheme of the act is simple. Permits or approvals authorizing waste discharges are issued by regional environmental protection managers. The act requires the Ministry to refer permit applications to other government agencies. Managers' decisions on permits, approvals or orders may be appealed to the director and then to the Environmental Appeal Board established under the Environment Management Act.[17] The Lieutenant-Governor in Council (Cabinet) may "vary or rescind a decision of the Board in the public interest, but there is no right of appeal to the Lieutenant-Governor in Council."

The act contains a different mechanism for dealing with municipal liquid waste (sewage), municipal solid waste (refuse) and biomedical waste. In the case of sewage, municipalities are given the option of developing and obtaining approval of a municipal liquid waste plan. In the case of refuse and biomedical waste, regional districts must prepare a waste management plan. The municipalities, after public consultation, prepare a waste management plan and submit it to the Minister of Environment, Lands and Parks. If approved by the Minister, the plan authorizes the municipality to discharge waste in accordance with its terms. In addition, a municipality may obtain the right to restrict the discharge of any type of waste, other than domestic sewage, into its sewage facility, if it secures the designation by Cabinet as a sewage control area. The Minister may amend, suspend or revoke a waste management plan.

3.2 Pollution Prevention

The Ministry wants to make pollution prevention its first priority and primary focus. The term 'pollution prevention' may become the hallmark of environmental policy in the 1990s and beyond. Pollution prevention aims to reduce the amount and/or toxicity of pollutants being generated. It does this through many means, such as using less toxic inputs; redesigning products; altering manufacturing processes; conserving energy in homes, businesses, vehicles and power plants; public education; and reducing the use of agricultural chemicals.

> Pollution prevention means the reduction or elimination of pollutants at their source so that waste is not generated. It contrasts with 'end-of-pipe', 'collect-and-contain', or 'release-and-dilute' controls, which are designed to treat or control releases of waste already generated.
>
> Pollution prevention emphasizes the efficient, and therefore more profitable, use of material and energy resources. It contrasts with the costly treatment of resource wastes that often are by-products of materials or energy.
>
> Pollution prevention reduces the total amount of pollutants in the environment. It does not simply shift them from one environmental medium to another, as do many pollution control strategies.[18]

Many people are concerned that despite enormous expenditures and good will, our efforts to abate pollution have not been successful. Where improvements have been gained — as with airborne lead emission, DDT and PCB concentrations, and mercury in water — actual production of the pollutant has been prevented. In short, the strategy of pollution prevention requires changes in the technology of production in an effort to eliminate certain pollutants, and achieve 'zero discharge'. It is increasingly recognized that the strategy of 'end of the pipe' control and waste treatment has not protected our environment.

The adoption of a pollution prevention strategy would be a major shift in the way the Ministry does business. The present focus of the program is waste management not waste prevention. In principle, present legislation has restricted the Ministry

from finding creative, cost-effective solutions for pollution abatement. Pollution prevention, as defined above, is simply not part of the Ministry's mandate. In actual practice, this has led to difficulties, such as an inability to regulate the way industrial facilities handle raw materials. Contaminants that can damage the environment are often present in higher concentrations in fuels and other raw materials used for industrial processes than in the wastes produced by those processes. If these raw materials are allowed to escape into the environment the damage can be just as serious as that from 'waste' discharges. Another difficult regulatory situation can arise when wastes are suitable for recycling if these materials are no longer controlled as wastes. Again, it is necessary to manage these materials in a way which conserves resources and prevents pollution.

Pollution prevention can be applied at all levels of economic activity. While pollution control relies on technological solutions, pollution prevention uses a wide range of strategies, from information exchange, to partnership agreements with the private sector, to regulation. The slogan "Pollution Prevention Pays" is incontestably accurate. By improving production and energy efficiency, and by reducing, replacing or reusing certain toxic chemicals, the costs of pollution control for a firm can be greatly reduced. Moreover, as environmental laws force companies to bear more of the real costs associated with their discharges, many will find that they can gain substantial savings by aggressively reducing toxic chemicals.

There are perhaps five general categories of industrial pollution prevention strategies:

1. **Input substitution:** By using less hazardous and/or more efficient inputs, firms can decrease pollution.

2. **In-process recycling:** On-site recycling of waste products in the production process can reduce pollution, and gain considerable savings .

3. **Process modification:** For example, more advanced technology, improving the efficiency of equipment operation, optimizing raw material use, and modifying equipment can enhance material recovery.

4. **Improved plant operations:** Improved management or 'housekeeping' procedures have likewise served to reduce pollution. Examples include conducting environmental audits, establishing regular preventive maintenance, specifying proper material handling procedures, and implementing employee training and feedback programs.

5. **Changes in End Products:** Product redesign may also be effective. For example, producing chemicals as pellets rather than powder may decrease the amount of waste dust lost during packaging. Unbleached paper products can replace bleached alternatives. Products may also be redesigned to facilitate reuse or recycling.

In the United States, authorities have begun to change their approach in recognition of the benefits of pollution prevention. In 1988, the Environmental Protection Agency (EPA) created the Pollution Prevention Office, to supplement its normal abatement and enforcement mandate. Its mandate includes the following objectives:

1. Ensuring that pollution prevention concepts are incorporated into every feasible aspect of internal EPA decision-making and planning.
2. Providing financial and technical support for state and local pollution prevention programs.
3. Developing an outreach program to emphasize the opportunities for and benefits of pollution prevention.
4. Developing and maintaining a multimedia clearing-house.
5. Collecting, analyzing, and disseminating data to target opportunities and to evaluate national progress in pollution prevention.[19]

At least 35 states have developed waste reduction programs since New York's precedent in 1981. A great deal of legislation has emerged. Some states emphasize information and technical assistance services for businesses of all sizes. Others, such as California, Massachusetts, North Carolina, and Oregon, have required industries to submit documentation relating to pollution prevention. As well, some states have begun to require industries to develop and carry out plans for reducing use of toxic substances. For example, North Carolina's pollution control legislation states that any firm requiring an environmental discharge permit must document current and projected source reduction and recycling, as part of their annual fee payment process. A grant from EPA will allow detailed review of the data to identify local, state, and regional trends and priorities for source reduction.

Recommendation 17:

The BCEPA should enable a comprehensive pollution prevention strategy to be established. The Ministry's mandate should no longer be restricted to 'waste' management. The new emphasis should be upon voluntary stewardship, education, information exchange, and partnerships with others, with the ultimate reserve authority for the Minister to make regulations, as deemed necessary. To facilitate better and more cost-effective compliance, the act should also contain authority to require certification of operators responsible for particular waste management facilities, such as industrial waste treatment facilities, landfills, sewage treatment plants, and those who service or repair equipment that can lead to pollution of the environment. At the discretion of a regional manager, firms subject to permits or regulations should be required to document current and projected source reduction, reuse and recycling efforts.

3.3 Precautionary Approach to Pollution

Related to the pollution prevention approach is the central German environmental policy of *Vorsorgeprinzip*, roughly translated as the 'precautionary approach'. First developed for the North Sea, in 1986 the German government promulgated the following formal guidelines:

> "The federal government bases environmental policy on a broad concept of *Vorsorge*. As a principle for political action, environmental *Vorsorge* comprises actions which serve:
>
> - the protection against environmental hazards;
> - the avoidance or reduction of risks to the environment before specific environmental hazards are created; and
> - in a future perspective, the management of our future environment, in particular the protection and the development of the natural foundations of life."

The principle of anticipating pollution is crucial, as is a shift in the burden of proof.

> "The precautionary principle shifts the burden of proof from those who would protect the environment having to prove damage, to industry which must not so much prove safety . . . but must assume that any unnatural substances or natural substances in unnatural quantities, has the potential for harm and must therefore be either contained, or not used at all, especially if there is evidence of toxicity."[20]

Recommendation 18:

The BCEPA should provide a strong basis to not allow or to control a discharge if damage or harmful effects are likely to be caused, even where there is inadequate or inconclusive scientific evidence to prove a conclusive link between emissions and effects.

This preventative approach is followed in several European countries.

3.4 Waste Reduction

Among the present priorities of the Ministry is development of a solid waste management strategy for British Columbia. It would move the province towards a target of better than 50% less waste per capita discharged to landfills or incinerators. Regional districts are preparing solid waste plans with similar objectives. Recycling plants for tires, batteries, plastics and newspapers, as well as waste reduction and processing plants, are being established in British Columbia. Partnership programs are being developed to encourage product stewardship, such as the 'cradle to grave' management of oil, plastics, paints, CFCs and other goods that are difficult to dispose of.

The federal and provincial governments have promised that by 1993 standards and regulations will be established to reduce waste from packaging materials. These will be employed if voluntary government and industry actions fail to achieve the 1992 waste reduction target of 20%. This is set out in the National Packaging Protocol, announced in April, 1990. Packaging accounts for 30% of the solid waste stream and is its largest single component. The goal is to reduce waste from packaging by 50% by the year 2000.

The National Packaging Task Force has recommended that the sale of certain products containing non-recycled or non-recyclable materials be restricted or banned where an equivalent product is available which is either reusable or recyclable and preferably made from recycled materials.

For other components of the waste stream, the federal government promises to develop national standards, codes, policies, and regulations for the reduction, reuse, and recycling of wastes by 1994. It has also promised to expand the national waste exchange program, to improve market opportunities for the reuse and recycling of industrial and large volume wastes, and to establish an Office of Waste Management to coordinate federal programs under the National Waste Reduction Plan.

Recommendation 19:

The BCEPA should strengthen support for a Waste Reduction Strategy. The Ministry should be required to coordinate and promote a provincial waste reduction strategy and to provide technical advice to industry, governments and the public. The BCEPA should provide a legislative basis to restrict or ban the sale of products which are not reusable or recyclable and preferably made from recycled materials. In addition, the BCEPA should allow specified materials to be banned from disposal if recycling alternatives exist.

Under certain conditions, regional districts should be encouraged to implement a schedule of graduated 'tipping fees', pursuant to their Solid Waste Management Plans.

Recommendation 20:

The BCEPA should provide legislative authority to establish a system of disposal fees in order to compensate authorities for the added cost of disposal for particular items that are difficult to dispose of.

The B.C. Minister of Finance and Corporate Relations has instituted a disposal levy on new vehicle tires and new lead-acid batteries. Disposable diapers are no longer exempt from the Social Service Tax Act. In West Germany, the Netherlands and several other European countries, a surcharge has also been imposed on the sale of lubricating oil.

Recommendation 21:

As part of the BCEPA legislation development process, the provisions establishing special levies under the Social Service Tax Act should be reviewed and changes made if necessary to support waste reduction and pollution prevention goals.

Recommendation 22:

Authority should be established so that fees and levies could be fully or partially rebated or exempted for products and materials that achieve specific waste reduction or recycling objectives or that use recycled materials.

Manitoba has enacted a Waste Reduction and Prevention statute (WRAP),[21] and other provinces, such as Saskatchewan and Alberta, are following suit. Such WRAP legislation is designed to give the Minister power to enter into agreements for waste reduction and prevention. It empowers the Minister to work with the producers of products and materials which become waste, or have the potential to become waste, to develop and implement waste reduction programs. Under the Manitoba legislation, grants and other financial assistance may be offered to encourage WRAP. Deposits and handling fees are authorized to be set by regulation, so that consumers contribute to the costs of WRAP. Producers are likewise required to collect such deposits and handling fees. The legislation also requires producers to pay "pre-disposal levies, licence fees or other assessments" as their contribution toward the cost of WRAP.

Producers of designated products and materials may be issued licences tied to specific volumes of waste generation. If they produce more than their licence allows, they are subject to penalties. Producers of such designated products or materials would also have to post a bond, contingent upon reaching a specified waste reduction target. Those failing to reach this target would forfeit the bond, in whole or in part.

Certain products and materials may be subject to special levies or fees, with revenues linked to environmental protection initiatives. Certain products and materials may be banned if there is no provision for their safe disposal or if they present serious obstacles to minimizing waste. This could include packaging prone to becoming waste, where substitutes are readily available. A recent waste minimization initiative developed along these lines in Germany has dramatically reduced the quantity of plastic packaging. The principle of stewardship for all phases of

production, including disposal, is a vital component of this German measure. British Columbia needs to reduce the municipal and other waste streams, and specific statutory authority to regulate and enforce provincial reduction, reuse and recycling objectives is needed.

By requiring manufacturers to reuse certain materials in their production processes, a market demand for these materials will be created, to address situations where industry does not voluntarily close the production/recycling loop.

Recommendation 23:

The BCEPA should contain so-called WRAP (Waste Reduction and Prevention) provisions. The BCEPA should also provide statutory authority to regulate the identification of plastic resin types, the first step in recycling and/or reducing certain plastics. Similarly, the Ministry should be empowered to set recycled content requirements for specific products, to complement existing efforts now underway in the private sector.

Recommendation 24:

Special levies may be established through the Social Service Tax Act to support specific initiatives aimed at waste reduction and prevention.

In situations where voluntary stewardship programs with industry do not lead to 'life-cycle responsibility' for wastes, a provision requiring retailers to accept post-consumer waste will also assist in promoting recycling.

Recommendation 25:

Within a stipulated period of time, the BCEPA should enable point-of-sale retailers to be required to accept designated post-consumer waste from the products they sell, such as household batteries, waste oil, and packaging.

3.5 Litter Control Strategy

The Ministry is developing a litter control strategy for the province. As a result of our pioneering a refund system for certain beverage containers, over 84% of

containers subject to the legislation are now returned. However, the present legislation does not cover milk, fruit juice bottles, wine and spirit bottles, and a variety of other containers. Germany has passed legislation that enables the federal government to impose deposits on products that could create problems in landfills. Similar measures could be contained in the BCEPA.[22] Options to be considered for implementing a new strategy include point-of- sale returns, deposits, blue boxes, depots and voluntary arrangements.

Recommendation 26:

Under the BCEPA, the deposit-refund system should be given statutory footing, and at the discretion of the Minister, be extended to cover any products that are either hazardous or difficult to dispose of in landfills. As suggested in the Rabbitt Report,[23] the BCEPA should contain enforcement measures that facilitate prosecution of littering offenders, particularly those who dump outside landfills. As much as possible, these enforcement powers should be delegated to local governments.

This provision becomes especially important as municipalities adopt volume-based garbage service rates.

Recommendation 27:

As a secondary strategy, where the preferred deposit-refund system is not functional, other options should be pursued to address the industries "whose products, including the packages, wrappings and containers thereof are reasonably related to the litter problem," as under the Washington State's Litter Control Act.

4
INTEGRATED DECISION-MAKING

The current Waste Management Act contemplates a permitting approach to pollution control. The administrative costs both to government and to permittees is enormous and it is impossible to capture the many small dispersed sources. A more imaginative approach may be long overdue. One modified approach is already well underway. Rather than subjecting often small discharges to specific terms in a permit thereby targeting specific firms, another approach — already reflected in various regulations under the Waste Management Act — is to address classes of discharge.

For example, the Placer Mining Waste Control Regulation[24] simply requires those operating a certain class of placer mining and causing discharges into the environment, or mining in a stipulated part of the province, to meet certain requirements stipulated in the regulation. If they do so, they are exempt from the requirement to hold a permit or approval under the Waste Management Act.

A similar approach has been applied to aquaculture waste control,[25] antisapstain chemical discharges,[26] and the discharge of organochlorines from pulp mills. If effluents containing antisapstain chemicals are discharged, permits need not be held, so long as stipulated conditions are met and the firm complies with any monitoring program established by the regional manager.

Recommendation 28:

The BCEPA should continue the authority to make regulations governing classes of discharges, such as small or less environmentally significant discharges, (e.g. asphalt operations and laundromats) for which individual permits would no longer be required.

Should this regulatory approach completely replace the permitting approach? The

Workers' Compensation Board makes regulations governing workplace safety, instead of issuing site-specific permits. Before adopting a regulation, the WCB must hold a public hearing, and give prior notice in newspapers.[27]

Rather than hold public hearings to address each waste management permit for the same kind of discharge, general issues could be addressed in a 'notice and comment' form of public consultation. Where interest warrants, the Ministry could convene a meeting to address the regulation and its parameters.

Sometimes when a particular facility is to open or expand its operations in a community, residents will still seek a public hearing, prior to the permits being issued. Occasionally, this need could be eliminated by more general rule-making hearings. In some cases broad provincial standards set out in regulations would be adequate. In other cases, regional officials would need to tailor site-specific requirements in a permit. It is clear that a 'one size fits all' regulatory approach is simply not appropriate for all cases.

Recommendation 29:

It is recommended that the BCEPA include provisions which support general rule-making for those situations where that approach would be appropriate.

The expanded use of planning mechanisms for pollution prevention may be applied to industrial sources of pollution as well as to local governments. Such an approach would support the concept of integrated decision making and address various requirements for environmental protection. For example, such measures could ensure that a water pollution problem is not simply transformed into a land or air pollution problem.

Under an industrial pollution prevention plan, it would no longer be an acceptable defence to a pollution abatement order for an industrial operation to claim that a source of pollution was not a 'waste'. Experience shows that by working with an industry to identify opportunities to reduce the use of toxins, such discharges can sometimes be eliminated entirely — for the mutual benefit of the industry and the environment.

Recommendation 30:

For large, integrated industrial complexes, the BCEPA should enable an 'industrial pollution prevention plan' to be prepared, so that environmental protection officials may regulate the entire plant comprehensively. Where such a pollution prevention plan is approved and implemented, its provisions may supersede other regulatory requirements in the Spill Reporting Regulation, the Special Waste Regulation, and so forth.

There is a danger that over-reliance on elaborate plans can be counter-productive. Sometimes, plans can become merely schedules for delay of compliance. The Ministry must not replace a program of strict enforcement of regulatory or permit requirements with a program of endless discussions and uncertain plans. Environmental planning must be a supplement to the strict enforcement of environmental rules, not a replacement for such measures. The challenge is to take the best of both approaches and to apply the correct measure to the right situation.

Another approach might be to rate particular firms or local governments on the basis of their adherence to waste management plans, permits and regulations. Just as financial institutions provide 'Triple A' ratings to firms for certain purposes, the Ministry could use economic incentives and the tax system to reward firms and municipalities for their environmental progress.

Recommendation 31:

In order to provide economic incentives and rewards, the BCEPA should allow the evaluation of firms and local governments on their degree of compliance with the requirements and schedules contained in approved waste management plans, operational certificates and other regulatory requirements.

5
FAIRNESS

5.1 Variance Orders

One of the more controversial provisions found in the Waste Management Act concerns 'variance orders'. Under section 13 of the act, the Minister is allowed absolute discretion to give a permit holder 'temporary relief' from a permit, plan, order, or the like. The time period during which a variance order is in effect is not defined. There is no available appeal from such a variance order. The only public notice that the Minister needs to provide is to place a notice in the *B.C. Gazette*.

There may be temporary circumstances in which compliance with an existing permit is technically impossible. By empowering regional managers to grant a temporary short term variance, compliance might in fact be enhanced: unless the permittee has secured a variance, there could be no excuse for non-compliance. By stipulating that variance orders must be confirmed by the Minister after a limited period, the need for province-wide consistency and accountability for regional decisions would also be emphasized.

Recommendation 32:

The BCEPA should amend the current provision for variance orders, to require public notice and an opportunity for input before a variance order is implemented. The act should also empower regional managers to grant variance orders for a limited time, up to 90 days, after which time the Minister may confirm, vary, or rescind such orders, once public notice and an opportunity for input has been provided.

5.2 Pollution Abatement Orders

Some enforcement provisions are found under the Environment Management Act; others are contained in the Waste Management Act.[28] The pollution abatement orders possible under the Waste Management Act apply only if the manager is satisfied "that a substance is causing pollution." Such orders cannot be employed if the manager is seeking to *prevent* pollution. For example, if there are PCB-laden transformers stored dangerously on a wharf, few practical remedies exist.

Similarly, these powers may not be available to the Minister in dealing with local government authorities, again handicapping regional managers who may need to take quick action in dealing with a municipality or regional district.

Recommendation 33:

The BCEPA should harmonize and consolidate the kinds of enforcement provisions currently found in legislation administered by the Ministry.

Recommendation 34:

The BCEPA should ensure that pollution abatement or prevention orders may be issued by regional managers to all permit holders, regulated entities such as local governments, and other organizations and individuals. It should also be possible to issue these orders to prevent pollution, if, in the opinion of the manager, pollution is likely to occur.

6
PROCEDURAL REFORMS UNDER THE BCEPA

The pollution prevention aspects of the new BCEPA will be closely linked to procedural changes recommended for appeal and enforcement procedures. These issues will be addressed in detail in a later discussion paper; however, the following points should be incorporated into the BCEPA with particular reference to pollution prevention.

6.1 Access to Information

The Government of British Columbia in now committed to enacting a freedom of information statute. The BCEPA should also contain guarantees of greater access to Ministry information.

Interested citizens should have a statutory right to review monitoring and compliance data. Moreover, this monitoring data should be made available on computer disks or by modem data transfer, if possible. Not only would this reduce the need for paper, but also the data would often be more useful in this format.

Recommendation 35:

The BCEPA should require that monitoring and compliance information be made available to the public in a timely manner, and, where practical, in computer format.

Most firms that generate wastes are required to submit their own monitoring data, which may be supplemented by spot audits by Ministry officials.

Recommendation 36:

The BCEPA should require waste dischargers to provide compliance information as 'raw data', and evaluation/interpretation of the data, in accordance with regulations under the act or in requirements contained in permits or plans.

Since July, 1990, the British Columbia Minister of Environment, Lands and Parks has released a list of industrial operations and municipalities "which are either not complying with their waste management permits or which are deemed by the Ministry to be a potential pollution concern." This policy appears to have had a major effect on corporate behaviour in British Columbia. By focusing media and public attention on specific pollution problems, it has increased pressure to resolve these problems.

Recommendation 37:

The BCEPA should support the regular publication of clearly defined classes of non-compliance information.

6.2 Notice and Comment

The provisions of the new act should promote public involvement in setting standards. Legislation in Quebec[29] now provides for mandatory publication of proposed regulations. Few things are more suspect to an increasingly well-informed public than to learn that proposed regulatory initiatives have been shared with industry alone. Certain emergency rule-making would be exempt from such statutory requirements because of the need to act quickly in such situations. Under the federal government's 1987 Regulatory Plan, public notice of proposals by such federal regulatory agencies as Environment Canada is provided in the Canada Gazette.

Recommendation 38:

The BCEPA should entrench the principle of stakeholder consultation in policy development initiatives, through 'notice and comment' procedures.

Recommendation 39:

The Ministry should publish its proposed regulatory initiatives on a regular basis, along with a brief description of the purpose and content of the proposals, their statutory authority, expected effect, and the names of contact persons. If response warrants, the Ministry may convene a public meeting and consider written responses. Notices should appear in the *B.C. Gazette*, or a local publication in the case of regional initiatives. Also, citizens should be able to have their names placed on a mailing list, either a general one, or for specific kinds of Ministry initiatives.[30]

6.3 Appeal Reforms and Mediation

The BCEPA should contain provisions establishing the appeal procedures applicable to all environmental management decisions made by the Ministry. Although the issue of appeal reforms will be reviewed more fully in the future discussion paper on the general provisions of the BCEPA, there are several principles which should guide the drafting of new legislation in this regard:

Recommendation 40:

- **Consolidation — To the greatest extent practicable, a uniform process should be established for appeals under the various statutes. In some cases it may be prudent to retain unique procedures where the nature of appeals involved make this necessary.**
- **Integration — Appropriate changes in the various statutes should be designed to facilitate an integrated approach to decision making. This will similarly allow an integrated approach in appeal decisions.**
- **Alternative Dispute Resolution — Methods and opportunities should be established at several points in the decision making process to allow alternate dispute resolution processes to be employed. While such processes should not preclude any right to appeal, it is expected that many issues which currently enter the appeal system could be eliminated and result in a significant reduction in the number of appeals and in the costs to parties.**
- **Flexibility — There should be room for flexibility in the decision making processes. For example, there should be the ability for a regional director,**

or other appropriate official, or a professional in alternative dispute resolution, to be called on to assist in resolving a dispute.

- **Standing — This issue of who has 'standing' to launch an appeal of any decision under the Ministry statutes should be harmonized.**
- **Accountability — All decisions made by Ministry officials should be appealable where it can be shown that someone's rights are negatively impacted. In addition, where a regional district or municipality acquires decision making powers pursuant to Ministry statutes, any decisions it makes should be appealable, in order to further enhance accountability.**
- **Fairness — The entire process should be fair and give the appellant all the protection of administrative fairness and natural justice.**

6.4 Whistle Blowers' Protection

Whistle blowers' are employees who disclose employer violations of the law to their management, union, government, or the press, thereby placing their jobs at risk. At present, even if the Crown has grounds to obtain an injunction to stop an environmental violation, a whistle blower has no protection against dismissal with notice. Consequently, there is an incentive for public servants and private sector employees to remain silent, often to the detriment of the public interest in environmental protection.

The Canadian Environmental Protection Act contains a whistle blower provision, as does the Ontario Environmental Protection Act.[31] This prohibits employers from dismissing, disciplining, penalizing, coercing or intimidating an employee who has complied with certain Ontario environmental statutes, or has sought enforcement of the legislation, given information to the government, or has testified in a proceeding brought under one of the acts. An even stronger provision is found in the American Superfund law, which reads:

> "No person shall fire or any other way discriminate against, or cause to be fired or discriminated against, any employee or any authorized representative of employees by reason of the fact that such employee or representative has provided information to a state or to the Federal Government, filed, instituted or caused to be filed or instituted any proceeding under this Act, or has testified or is about to testify in any proceeding resulting from the administration or enforcement of the provisions of this Act."[32]

Recommendation 41:

An option to be considered for inclusion in the BCEPA should be to provide protection to those who disclose the violation of environmental laws. The legislation should ensure that they are not stripped of protection due to overly technical requirements.

7
HAZARDOUS WASTE MANAGEMENT

B.C can learn a great deal from examples set by other countries on how to manage hazardous wastes safely and effectively. According to the U.S National Academy of Sciences, there are three basic ways to deal with 'special' or hazardous waste:

1. Waste disposal prevention through waste reduction, recycling, and reuse;
2. Conversion to less hazardous or non-hazardous material;
3. Perpetual storage.[33]

The first method involves modifying industrial or other processes and reusing or recycling hazardous wastes, but no country has yet implemented an effective program to achieve this essential goal. However, the U.S. EPA estimates that at least 20% of the hazardous wastes currently generated in the United States could be recycled, reused, or exchanged, so that one industry's waste becomes another's raw material. Are British Columbia firms aware of these opportunities? How much waste disposal could be avoided through such measures? Does the Ministry have a mandate to follow these technological breakthroughs, and to communicate them to the firms and municipalities that it regulates?

As an example, North Carolina has a major Pollution Prevention Pays Program, which offers technical assistance, information, and matching grants to small and large companies and communities wanting to implement waste reduction and recycling projects.

Recommendation 42:

The BCEPA should provide clear incentives to B.C. industry and citizens to reduce hazardous waste. The Ministry should have an explicit mandate to educate and collaborate with industry and others (and in certain cases to require its participation) on methods to reduce, reuse, recycle and recover the hazardous waste generated.

7.1 Toxics Use Reduction Legislation

One of the Ministry's priorities must be to encourage industry and the public to reduce the number and quantity of toxic substances in use today.

In 1989, Massachusetts and Oregon passed legislation that requires industrial planning to reduce the use of toxic chemicals.[34] The premise of these Toxic Use Reduction statutes is that pollution prevention is cheaper and more effective than waste management through a confusing array of regulations and permits, each aimed at controlling one specific type of toxic pollution. Provisions place the highest priority on reduction of the use of toxic chemicals use, rather than off-site recycling or management of residuals. These acts pursue a multimedia approach designed to avoid transferring pollution from one medium to another. Industries using large quantities of toxic chemicals must develop comprehensive plans for their use. The requirement is intended as a self-help provision, to assist industries to become more efficient, as they become cleaner.[35]

After extensive consultation with industry and other stakeholder groups, the Massachusetts Department of Environmental Protection has developed criteria for plans to reduce toxics. The legislation aims to reduce generation of toxic waste statewide by 50% by the year 1997. The department also drafted regulations for reporting requirements, with forms and instructions. The legislation safeguards the confidentiality of the information gathered, alleviating fears voiced by companies that the information they provide might later be used against them in enforcement proceedings. In Oregon, these plans remain at the regulated facility and may be reviewed by the department, but are otherwise treated as confidential unless the facility becomes the subject of an enforcement action

Germany passed the Waste Avoidance and Waste Management Act in 1986. Its focus is on waste reduction and recycling/reclamation of wastes that are "necessarily created." The German Parliament has authority to determine and priorize which waste streams must be reduced. The percentage reduction will then be decided, and all generators will be forced to achieve this reduction. Subsidies may be given to

affected industries to reduce or find substitutes for products that might be harmful if improperly discarded. In implementing the act, the German approach is to develop codes of practice, rather than regulations. The Minister of Environment discusses policy objectives with waste generators, recyclers, local government and the public to determine which cooperative measures can be implemented. If this process stalls or fails, then waste reduction can be enforced through regulations.

'Environmental audits', which can be used to develop toxics use reduction plans are already a feature sometimes used in British Columbia. They would be of more importance if a pollution prevention or toxics reduction approach was taken in legislation.

One should also be optimistic that program integration will pave the way for regulatory reform to simplify and coordinate the permitting process. For example, in Massachusetts, it has been suggested that the Department-industry partnership was the reason the Toxic Use Reduction Act was unanimously passed by its legislature.

Recommendation 43:

The BCEPA should facilitate the requirement to conduct environmental audits. The results should be treated as confidential, so that comprehensive information can be generated by and for firms without fear that it could be used against them in an enforcement proceeding.[36]

Recommendation 44:

The BCEPA should provide regional managers with the discretion to require toxics use reduction plans, with specific reduction targets and deadlines. Reporting requirements should be set by regulations under the act. All information generated by industry during the process should be kept confidential.

Recommendation 45:

Under the BCEPA, a toxics use reduction plan should be required as a condition for obtaining or renewing a waste management permit. No permits or permit amendments should be allowed unless these plans have been implemented within a stipulated schedule. These plans should be subject to regular review, perhaps every three years, to reflect technological advances. The act should also enable the Minister or his or her designate to provide economic incentives, such as grants and recommendations for provincial loans, for related costs.

7.2 Pesticides

Pesticides include all chemicals used to control pests. These products vary widely in their toxicity and environmental effects. The Pesticide Management Program of the Ministry of Environment, Lands and Parks is committed to many of the same principles outlined above, such as the reduction of hazardous and unnecessary pesticide use.

The Ministry is heading in a new direction by encouraging and promoting the use of alternatives to pesticides. Under the BCEPA, regional managers should be able to require major users of pesticides to produce acceptable corporate Pest Management Plans. In particular, Integrated Pest Management (IPM) strategies should be explored and research for new IPM methods should be supported.

As the objectives of the program are very similar to the toxic use reduction strategy, the provisions for pesticide management could be integrated with other environmental protection measures. A separate discussion paper *New Directions in Pesticide Management* has been released which addresses Pesticide Management issues in detail. A parallel consultation process focused on pesticide issues will lead to the appropriate legislature revisions in the BCEPA.

8
CONTAMINATED SITES

Over 250 contaminated sites in British Columbia are now known to the Ministry. All provinces and the federal government are developing contaminated sites legislation and procedures, to assign costs and implement clean-up activities in an orderly way and to incorporate the same general principles.

In 1990, the Waste Management Act was amended to include contaminated site remediation. Where a 'contaminated site' is found to contain special waste or any other substance specified by the director, remediation may take place and a regional manager may issue a 'certificate of compliance' for the site. Also, the manager may obtain information about pollution and issue an order to carry out remediation "in accordance with any criteria established by the director" and any additional requirements that the manager specifies.

Further legislative requirements for remediation of contaminated sites are now being finalized. In January, 1991, a discussion paper on this topic was published by the Ministry and circulated for public comment.[37] It identified several components of a more comprehensive regulatory framework for contaminated sites.

It is expected that the recommended legislative provisions described in this section will be added to the Waste Management Act in 1992 and then be carried forward into the new BCEPA. The recommendations and discussion in this section are merely intended as a summary; for greater detail, the reader should refer to the January, 1991 discussion paper.

As the issue of contaminated sites often appears during the development approval process at the municipal or regional government level, it seems desirable, where mutually agreeable, for the Ministry to delegate appropriate responsibilities to local government officials, while reserving the power to set guiding standards in criteria

or regulations.

Greater involvement of local governments will be particularly desirable where there is a need to integrate the review of contaminated sites with the conventional land use planning process. This integration should also help overcome the inefficiencies of two separate review processes.

Recommendation 46:

The BCEPA should enable the Minister, where mutually agreeable, to delegate responsibility to appropriate local governments to manage the site evaluation and remediation planning process, with the Ministry providing technical assistance and the necessary criteria and regulations to ensure uniform program delivery.

Recommendation 47:

The BCEPA should provide for public review of remediation proposals for major contaminated sites, to include such issues as the nature of the remedial action anticipated, the technology to be applied, monitoring requirements, and so on.

Other legislative requirements involve the identification and assessment of contaminated sites and establishing the liability of responsible persons.

Recommendation 48:

The BCEPA should clarify the circumstances under which there is a duty to report contamination problems that might exist. Based on prescribed information, the Ministry should be able to attach priorities for action. The act should assign civil liability that is absolute, retroactive, and joint, for remediation of contaminated sites to 'responsible persons' in keeping with the 'polluter pays' principle. Under the act, 'responsible persons' (operators of industrial activities, owners, waste generators, transporters and perhaps persons who unlawfully hinder or delay entry to sites for investigation, removal, or remediation action) could all be required to pay clean-up costs. The act should confirm that persons may show cause why they should not be held responsible, in the same manner that appeals can now be launched against other decisions under the Waste Management Act.

Where 'responsible persons' cannot be located or made to contribute, and 'orphan sites' exist, funds may be made available by the federal government to match provincial clean-up expenditures on high risk sites.

Recommendation 49:

In order to meet conditions for the jointly funded national 'orphan sites' program, the act should also provide authority, for the Ministry to establish a provincial inventory of contaminated sites.

Recommendation 50:

The act should also clarify the Ministry's authority to establish provincial remediation standards whether in the form of non-legislated criteria or as regulations. Other provisions in the act should include the following:

- **clear authority for the Ministry to require persons to undertake remediation studies, on-site investigations and the like, and to remediate contaminated sites, on the basis of risk to human health or the environment;**
- **authority to establish statutory restrictions on future use of contaminated land;**
- **authority for regional managers to issue remediation orders which, if unanswered, may lead to the province conducting the remediation and seeking costs from 'responsible persons';**
- **authority to require financial guarantees to ensure appropriate remediation and long-term care of contaminated sites, perhaps similar to powers in the Mines Act,[*]**
- **authority to issue injunctions where necessary approvals are not obtained prior to development; and**
- **authority to set fines and penalties for filing false information, or for evading requirements, and authority to require vendors to disclose information on site contamination to prospective purchasers.**

9
AIR AND WATER POLLUTION PREVENTION

Opinion polls consistently show that air pollution and water quality are among Canadians' top concerns. The management of these resources is of utmost importance to the Ministry. The approach to regulating air and water pollution in B.C. has been to establish discharge requirements in the form of Pollution Control Objectives, establish legal standards through a permitting process and, by the use of appropriate control technology, achieve those standards.

Statutory intervention to prevent pollution has traditionally taken a number of forms. Legislation may involve ambient criteria or standards, discharge performance standards, or the prohibition of specific activities. 'Ambient criteria' (or environmental quality criteria) refers to the levels of contaminants in the environment that must not be exceeded, to protect the use of the air, water or soil, human health and the health of the environment. Individual discharge levels are then determined with the goal being to satisfy the ambient criteria. Ambient criteria are sometimes adopted as legally enforceable requirements and are then referred to as standards.

'Performance or discharge standards' differ from design standards or specifications in that the former deal with the objective to be accomplished, while the latter specify how the objective must be accomplished. The performance standard approach allows finding the most cost-effective way of achieving a certain discharge standard in each specific situation, while the specification standard approach generally requires compliance with certain design specifications. Specification or design standards are generally preferred when there are administrative difficulties, such as monitoring, in enforcing a performance standard and/or where there is certainty of achieving a specific performance standard by the use of specified technology.

Performance and specification standards can either apply to the current situation or at some future date. For example, the U.S. Clean Air Act sets standards to be achieved within certain time limits. In British Columbia, there has been much less emphasis to date on setting ambient environmental standards or legislated benchmarks for particular contaminants, against which regulators could measure and control specific discharges.

Recommendation 51:

The BCEPA should provide explicit authority to set ambient air, water and soil environmental quality criteria, which may be used to determine site-specific discharge requirements. With regard to environmental quality criteria for surface and ground water, appropriate integration of the proposed new Water Management Act should be ensured.

There are two approaches to preventing levels from exceeding the pollution control discharge standard. 'Input control' prevents or reduces the problem; 'output control' treats the symptoms. The latter has been the main approach in British Columbia and elsewhere. Input control methods related to air pollution can include reducing energy use, using energy more efficiently, and switching from fossil fuels to other types of energy, such as solar, wind or hydro-electric. Motor vehicle and other mobile source emissions can be controlled by a number of input control methods that are usually ignored in conventional waste management approaches.

Recommendation 52:

The BCEPA should provide explicit authority for the expanded use of input and output controls including controls related to mobile sources.

In some airsheds and watersheds, multiple sources including mobile sources contributing to contaminant loading creates a technically complex management and control problem. Special management solutions are called for in those situations.

Recommendation 53:

The BCEPA should enable Cabinet to designate one or more geographic areas as regional air or water basin authorities for purposes of air shed and water shed management. These jurisdictions would be empowered to prescribe and allocate permissible air shed or water shed uses, to prevent contaminant overloading from

multiple sources. With regard to possible water basin authorities, appropriate integration with the provisions of the proposed Water Management Act should be ensured.

Recommendation 54:

Another option may be considered. In Los Angeles and its South Coast Air Quality Air Management District, air shed authorities have the discretion to collect pollution fees based on statutory criteria, and authority to retain the fees to fund pollution control activities. If adopted here, this option could provide B.C. air shed management boards with incentives to vigorously regulate air pollution.

9.1 Best Available Control Technology (BACT)

Controlling toxic compounds emitted into the environment has been a daunting task. For example, although the U.S. Clean Air Act of 1970 ordered the EPA to evaluate the health hazards of hundreds of toxic compounds, by 1989 regulations had been issued for only seven of these pollutants. Estimating risks and benefits is a continual difficulty. Setting standards for each toxic pollutant is difficult and time-consuming. Rather than getting locked into lengthy risk/benefit debates on each individual pollutant, the Ministry needs to be able to set priorities for reducing contaminant loading on a technological basis.

In the past, pollution control objectives have been set for certain industrial sectors of British Columbia's economy. Although these objectives did not have the force of law, they constituted policy recommendations for setting requirements for specific pollutants in waste management permits. These objectives are being replaced by waste discharge criteria for point sources. These are province-wide criteria based on 'best available control technology' (BACT) principles and will also constitute policy guidelines for Ministry use, not legal requirements.

BACT is defined as:

> "the currently available state-of-the-art control technology which is proven to be successful in reducing waste discharges and has been applied for at least one year in similar facilities in the province or in other relevant jurisdictions. Control technology refers to all of the following: raw materials, fuels, process technology and pollution control equipment or devices used to minimize both generation and discharge of wastes." [39]

The waste discharge criteria will update and replace the present pollution control objectives. They will constitute a single value, rather than the range of values used currently. At minimum, any permits and approvals for new plants will need to meet the prescribed waste discharge criteria. BACT is only to be used to generate the appropriate level of control; it is not intended to require permittees to install the exact equipment or technology that was considered in determining BACT.

Recommendation 55 :

The BCEPA should authorize the Minister to replace an interim or long term chemical-by-chemical analysis approach to air and water pollution management with an industry-specific approach that uses technological standards based on BACT (Best Available Control Technology). First, the Ministry should be empowered to rank industries and municipalities according to the amount of pollutants they emit or according to their impact on health and the environment. Then, the industries or municipalities emitting the largest amount of pollutants causing the greatest environmental impact should be given deadlines to reduce their emissions or effluents to certain levels using BACT.

9.2 Small and Non-Point Sources

A major source of pollution that has largely escaped regulation is pollution from large numbers of small or 'non-point sources.' The problem arises in all media — air, water, and land. Most standard environmental regulation deals with reasonably large stationary sources, such as industries and sewerage facilities. Permits are required for effluents and air contaminants. Penalties for unauthorized discharges are readily available. However, a more subtle and less traceable form of pollution is caused by activities such as fugitive emissions, failed on-site waste disposal systems, agricultural waste disposal, intensive grazing, stormwater discharge, waste oil dumped into storm drains by householders, or soil and debris pushed into a watercourse. There are also the problems from all sorts of emissions from vehicles, ships, planes and trains and consumer products which can collectively become very significant.

Traditional methods of pollution control simply cannot address this serious problem of non-point pollution. Toxic substances from automobiles and road drainage may contribute lead, oil, grease, and complex hydrocarbons, which find their way

down storm sewers or into the air. Storm sewers in industrial areas of the shoreline can contribute heavy metals and organic compounds as well. Agriculture and forestry can lead to runoff of pesticides and herbicides, and excessive nutrient loading can be caused by fertilizers and manure in rural areas.

There are no simple solutions to the problem of pollution from non-point sources. However, because of the increasing relative impact of these sources on the environment efforts must be made to find solutions. Authority should be provided to establish standards, codes of good practice and regulations. Ultimately, the best answer is prevention, or at least the reduction of non-point sources of water pollution. However, more aggressive approaches to this problem have been attempted in some jurisdictions.[41]

Recommendation 56:

The BCEPA should provide a clear mandate for the Ministry to address pollution from small and non-point sources affecting air, land, or water.

In Colorado's Dillon Reservoir, the major source of drinking water for the city of Denver, nitrogen and phosphorous loading was causing eutrophication, even though the point sources of pollution were under control. A kind of trading approach was made to reduce non-point pollution, mainly from non-point urban and agricultural sources. The publicly owned sewage treatment plant was permitted to finance control of non-point sources, in lieu of having to upgrade its own treated effluent. As a result, total phosphorous loading was reduced much more cheaply. A 2:1 ratio on trades was used, so that the sewage facility was required to control at least two pounds of non-point phosphorous for a credit of one pound from the point source.

Recommendation 57:

The BCEPA should provide the Ministry with the ability to authorize pollution trading if pollution from non-point sources would be reduced in a cost-effective manner.

10
MARKET-BASED INCENTIVES

The Ministry of Environment, Lands and Parks recognizes the enormous potential for environmental improvement and protection through market-based incentives. Market-based incentives provide monetary inducements to create environmental improvements. There are many different kinds of incentives, and they can be introduced at different stages, such as in a production process or on the final products. While it will be important to utilize this type of mechanism to achieve environmental protection goals, the Ministry should still continue to determine regulatory content, set standards, and ensure compliance.

Recommendation 58:

The BCEPA should provide authority for market-based incentives to complement, not replace, a strong enforcement approach to environmental protection.

There are a wide variety of market-based incentives. For example, mass transit, bicycles and the like are important methods of reducing air pollution, but are often ignored by conventional waste management approaches. Can prices and other market factors influence people to use automobiles less? It is expected that the enhanced planning requirements of the BCEPA will promote such alternatives. Raising annual registration fees on older, less fuel-efficient cars, or offering owners an incentive to retire such cars have also been considered. Adding a charge on all new cars based on the amount of the major pollutants their engines emit would also be an incentive for manufacturers to reduce emissions and encourage consumers to buy less polluting automobiles.

For example, in 1989 the government of Ontario implemented a 'gas guzzler' tax for all cars with fuel economy worse than 9.5 litres per 100 kilometres (29.7 miles per Imperial gallon). A Tax for Fuel Conservation took effect on August 1, 1991, doubling the tax on gas guzzlers. A new threshold was added at the 9.0 litres per 100

kilometres level, above which a $250 tax applied. In addition, cars with a fuel economy rating in the middle range (from 6.0 to 8.9 litres per 100 kilometres) are now subject to a $75 tax. To complement this tax scheme, a rebate of $100, credited at the time of purchase, is provided to purchasers of cars that have superior fuel economy ratings — defined as using less than 6.0 litres per 100 kilometres.

Recommendation 59:

The statutory authority should be considered to implement the kind of tax/rebate scheme on car purchases now existing in Ontario may be established through the appropriate legislation.

10.1 Taxes and Emission or Effluent Charges[42]

Taxes or charges can be applied to raw material inputs, discharges, or to the final product. In British Columbia, there has been a fee schedule for emissions, effluents, and solid waste discharges from a wide variety of commercial and industrial establishments, from dairy farms and dry cleaners to mines and oil refineries. Although comprehensive, these fees are presently too low to encourage serious investment in waste reduction. Moreover, they are based on capacity of production rather than on the amount of contaminants discharged, providing little incentive to further reduce wastes or prevent pollution. Another type of user charge is a tax levied on final products, such as the present levy on tires, which is designed to help pay for their disposal, recycling, or reuse.

Recommendation 60:

The statutory authority to impose fees or charges for environmental protection, which may be applicable to inputs, discharges, or to the final product should be established through the appropriate legislation.

A paper entitled *Revising British Columbia's Waste Discharge Permit Fee System: A Discussion Paper* was released on February 6, 1992 and contains details on possible changes to the discharge fee system.

Stated briefly, a firm or an individual could be required to pay the Ministry an annual amount equal to the total quantity of a designated pollutant (volume x concentration x time) being discharged, multiplied by a unit price or charge rate. As

the quantity and/or quality of the pollutant increases or decreases, the charge payment will vary accordingly, down to zero emissions. A firm's own monitoring data could be used as the basis for the charge. The use of such waste discharge permit fees would eliminate the economic incentive to delay implementing abatement measures. It would become more costly to discharge contaminants than to abate the discharges. Such a scheme would be more efficient and more equitable.[43] The charges would provide an automatic, continuing incentive to reduce discharges, and encourage firms to undertake research and development to find cleaner and more efficient production processes and treatment methods.

"The more you discharge, the more you pay" should be the general rule.

Recommendation 61:

The BCEPA should maintain authority for emission and effluent fees based on the amount and concentration of contaminants in the discharge or impact on the environment.

In some situations such as discharges into municipal sewer systems, the waste discharges are only indirectly controlled by provincial legislation. Local governments may be in a better position to regulate and control those individual discharges. In those situations, a mechanism should be established so that similar discharge fee incentives can be implemented at the local level.

Recommendation 62:

Upon approval of waste management plans, the BCEPA should allow local governments to be delegated specific authority to levy and retain user fees, such as tipping fees at landfill sites, air emission fees and charges on industrial effluent introduced directly into municipal sewage systems.

10.2 Transferable Emission Rights

The Ministry is considering the benefits and drawbacks of implementing an emission trading system as seen in some parts of the United States. Under the U.S. Clean Air Act, any new polluting source in highly polluted areas must secure more than compensating reductions in emissions from existing sources in the same region. This 'trade-off' or 'offset' requirement compels new pollution sources to finance clean-up

of pollution from existing sources to 'make room' for new source emissions. A number of these trades have already been made.

Under the U.S. Environmental Protection Agency's bubble' strategy for new sources, any firm that adds a new production unit to an existing plant can avoid some of the stringent requirements applying to new facilities if there is a compensating reduction of emissions from existing units in the same plant. The result is no net increase in emissions from the plant as a whole. A fictional 'bubble' is placed over the plant, and 'trades' among its facilities are allowed. Various components of an industrial plant are treated as a single source for regulatory purposes. Thus, emissions from all stacks are considered only in the aggregate. So long as the net effect is not to increase total emissions, there are no regulatory consequences. This encourages owners to maximize emission reduction control measures that are the least expensive, and decrease controls for the most costly clean-up efforts.

This more complicated market scheme was expanded and consolidated under the 1990 amendments to the U.S. Clean Air Act (Title IV of the Act). It established a market scheme for tradeable emission allowances. First, a single national cap for total sulphur dioxide emissions was set. The EPA was given powers for improved monitoring and enforcement and increased criminal penalties for any polluting firm, its directors and officers were authorized to ensure that the national cap would be respected. Second, emission allowances were allocated to existing utilities and a free market was established to enable trades in these allowances. As a result, firms were left with considerable latitude in deciding how the cap would be respected.

Under such a system of transferable emission rights, each source of pollution must have a certificate authorizing the release of a fixed volume of fixed toxicity of a given pollutant. Each firm or utility receives a specified number of these allowances, and their certificates also set monitoring and reporting requirements. Firms are free to sell, save, or purchase allowances according to their needs. The market is to determine the value of the allowances, in a highly decentralized fashion. Trading is expected to reduce the cost of abatement, but also to ensure that "the polluter pays."

To implement this type of system the Ministry of Environment, Lands and Parks would define a limited number of pollution units to be permitted within a given air shed or water body so as to ensure a desired level of ambient air or water quality. It would then commence a systematic program of reducing the total quantity of pollution permitted in that region. The permits would be freely tradeable among sources.

To the individual source, this permit system offers the same incentives as a fee system. The source must pay an additional price for each additional unit of pollution emitted, so it would have a strong incentive to reduce pollution in the most cost-effective way possible. As the total number of permits would be limited, the Ministry would be assured that its environmental quality goals would be met.

Manitoba has provided legislative authority for a similar strategy. Under its Environment Act, the Cabinet can establish a market for the emission of specific pollutants. The revenue from the sale of emission certificates is then to be held in trust in an environmental contingency fund to be used in the event of an environmental emergency.

Recommendation 63:

The BCEPA should provide enabling provisions so that a transferable emission rights system, as contemplated in Manitoba and the United States, could be implemented in B.C.

10.3 Other Tax Incentives and Subsidies[44]

Tax incentives are another possible market mechanism. Under the federal *Income Tax Act*, accelerated capital cost allowance is allowed for firms that install pollution abatement equipment. 'Rapid write-off' of such capital equipment gives a firm a tax break, and an incentive to install new technology. However, changes in a firm's production processes that achieve the same result are not rewarded. This has been criticized as a serious deficiency of that tax incentive.

Under the B.C. Municipal Act[45] and the Taxation (Rural Area) Act,[46] certain pollution facilities and equipment are likewise exempt from property taxation. This provides an incentive to acquire such property without fear that it will be taxed. Tax rebates and investment tax credits are other means to encourage the growth of a market for pollution abatement equipment and processes.

However, such measures appear to work at cross-purposes to the 'polluter pay' principle. By the use of subsidies and tax incentives, the government may end up subsidizing pollution. Should other agencies provide such incentives, it is important that the Ministry be able to evaluate them from an environmental perspective.

Recommendation 64:

During the BCEPA legislation development process, the provision of tax incentives and subsidies for environmental protection should be reviewed and improvements made where necessary.

10.4 Pollution Control Delay Penalties

Another economic incentive mechanism that can be used is that of pollution control delay penalties.

Under this scheme, the regional manager may assign to each permittee or regulated entity a schedule specifying the maximum allowable emission of a pollutant, which would decline over time. The schedule would set out the initial allowable discharge, the rate of reduction, and the ultimate objectives for a firm.

If a firm unduly deviated from its schedule so that its pollution exceeded the allowable amount, an automatic administrative penalty would be imposed. The penalty would be such that large excess discharges would be penalized proportionately more than smaller ones. The goal is to make the total penalty rate high enough to make compliance delays unprofitable. Penalties in the form of effluent or emission charges would be levied on firms that do not meet agreed deadlines. The charge could also be applied to emissions that exceed the objectives stipulated in a control order. A formula would be established by regulation under the BCEPA for calculating the rate, so that the total penalty charged is reduced as actual discharges approach target levels.

Recommendation 65:

The BCEPA should provide authority for pollution control delay penalties.

10.5 The Environmental Choice Program and Procurement Policies

A variety of 'seals of approval' may be given by the government to reward environmentally appropriate goods or technology. For example, in 1989 the federal Department of the Environment launched the Environmental Choice Program, an

'environmentally-friendly goods' campaign. Firms that produce goods that are less environmentally harmful will be entitled to display the environmentally-friendly *EcoLogo* on their products. This is designed to encourage environmentally-sensitive consumers to reward such innovations by purchasing the identified products. The Environmental Choice Board, consisting of citizens representing various interests and regions, has already awarded the certification to many products. To carry the EcoLogo, however, applicants must provide verification that they have complied with regulatory standards. If a company that enjoys the benefits of certification ceases to comply with environmental laws, it will lose its certification.

Recommendation 66:

Under the BCEPA, the Ministry should be given explicit authority to collaborate actively with the Environmental Choice Board or other such agencies. In consultation with the Purchasing Commission, the Ministry should encourage provincial government institutions to purchase those products that are certified by the board in preference to similar products which are not certified.

Government procurement policies may provide direct incentives to firms that are producing environmentally appropriate goods. For example, a requirement that the British Columbia government meet some or all of its paper requirements by buying recycled or unbleached paper would provide a major boost to an environmentally critical industry. A major obstacle to large-scale recycling is the lack of markets, which in turn is due to the potential users' reluctance to invest in process modifications. If all levels of government in B.C. decided to buy primarily recycled paper and other recycled goods, new markets could be created and major recycling would occur.

In the United States, the EPA has proposed an executive order that would establish a comprehensive federal procurement program. Recognizing that "pollution prevention and recycling must become the focus of our long-term strategy for environmental protection," the order calls on "all federal agencies, and government-owned, or contractor-operated facilities [to] reduce the generation of pollutants and waste . . . and set an example for the rest of society through the development of pollution prevention, recycling, and procurement programs . . . [to] stimulate demand and markets for clean, recyclable and recycled materials by revising procurement policies and specifications."

British Columbia developed the first Environmental Purchasing Policy in Canada in 1989. The British Columbia Purchasing Commission is committed to increasing its purchases of environmentally-preferred products for government. Developing specific product targets and recycled content standards for government purchases will be a key component in meeting this commitment.

Recommendation 67:

Under the BCEPA, the Ministry, in conjunction with the B.C. Purchasing Commission, should establish policies supporting preferential purchasing of environmentally appropriate goods by all ministries and government agencies. The act should facilitate minimum recycled material content standards and allow for a specified amount of certain products to be purchased, without consideration of price, for a stipulated period of time.

This way, the government could take into account that seemingly 'cheaper' products often have a hidden environmental cost. Such preferential purchasing would also help alter market dynamics in favour of environmentally beneficial products.

For example, Oregon has legislated a price preference of 5% for recycled paper. California, New York, and Maryland have procurement programs for secondary materials. These states have provided a market for recycled paper using price preferences and minimum content standards and 'set-asides' (allotting a specified amount of paper purchases to recycled paper without consideration of price). Texas also allows state agencies to pay up to 15% more for rubberized asphalt created from discarded tires. Similarly, B.C. Hydro can now apply an environmental premium to sources of electricity that are derived from environmentally acceptable sources. For example, in Williams Lake a project to burn woodchips for energy will replace dirty beehive burners with much cleaner energy incineration technology. This project benefited from the environmental premium.[48]

11
CONCLUSION

Nothing less than a comprehensive reform of the legislative provisions for environmental protection is required if we are to attain a sustainable environment. The public has demanded that its governments respond to this challenge. In some instances, the environment leaves us no choice.

This discussion paper contains many specific recommendations on key environmental protection components of the BCEPA. Some of the measures recommended will be controversial; others less so. But there can be no controversy about the need to act. More than ever, new ideas are needed. The goal of this paper is to stimulate public debate on the best course to take to protect our precious environment. Now it is your turn.

We want to hear from you. Please complete, by June 30, 1992, the comment page included on the final page of this document.

FOOTNOTES

1. Section 32 of the Discussion Draft of the Proposed Alberta Environmental Protection and Enhancement Legislation (1990) explicitly provides this kind of authority.

2. S.O. 1988, c. 41, section 2.

3. S.C. 1988, c. 22.

4. Section 3.3 of the Waste Management Act, S.B.C. 1982, c. 41, as amended.

5. Section 32 of Hospital Act, R.S.B.C. 1979, c. 176, as amended.

6. School Act, S.B.C. 1989, c. 61, s. 183.

7. S.O. 1983, c. 1. See also sections 17 and 34.

8. S.C. 1988, c. 22.

9. S.B.C. 1981, Chapter 14.

10. S.Q. 1987, c. 29, sections 8 and 9.

11. ibid, section 9 (emphasis added).

12. ibid, section 9.

13. Forest Resources Commission, The Future of Our Forests (April, 1991)

14. ibid, at page 26.

15. See A Prescription for Healthy Great Lakes (Feb. 1991), at page 16.

16. R.S.B.C. 1979, c. 239. Although the Waste Management Act contains sections to repeal the Litter Act, they have not yet been proclaimed.

17. S.B.C., 1981, c.14.

18. Council on Environmental Quality, Environmental Quality: Twentieth Annual Report to the President (Washington, D.C., 1990), at page 215-16.

19. ibid, at page 246.

20. P.J. Taylor, "The Precautionary Principle: Implications for the Paris Commission" (1988), at 5.

21. Waste Reduction and Prevention and Consequential Amendment Act, S.M. 1989-90, c. 60.

22. See M. Stone, Environmental Excise Taxes: Options for British Columbia (Environmental Protection Division, September, 1990), at pages 58-59, and 118-19.

23. A Solid Waste Management Strategy for British Columbia (March 1989), at page 111.

24. B.C. Reg. 107/89.

25. Aquaculture Waste Control Regulation, B.C. Reg. 470/1988.

26. Antisapstain Chemical Waste Control Regulation, B.C. Reg. 258/89.

27. Workers' Compensation Act, R.S.B.C. 1979, c. 437, Section 71.

28. See, for example, section 22.

29. Regulations Act. S.Q. 1986, c. 22.

30. See, e.g., Oregon's Administrative Procedure Act, s. 183.335 (7). It provides that

> "any person may request in writing that an agency mail to the person copies of its notices of intended action (...) Upon receipt of any request, the agency shall acknowledge the request, establish a mailing list and maintain a record of all mailings made pursuant to the request."

31. Section 134b, added by S.O. 1983, c. 52.

32. S.110(a) of the Comprehensive Environmental Response, Compensation and Liability Act.

33. C.T. Miller, Living in the Environment: An Introduction to Environmental Science (6th Edition, 1989) at page 475. (hereinafter "Miller").

34. See Oregon's Toxics Use Reduction and Hazardous Waste Reduction Act, and the Massachusetts Toxic Use Reduction Act, Stats. 1989, c. 265.

35. The stated purpose of the Massachusetts Toxic Use Reduction Act is to "sustain, safeguard and promote the competitive advantage of Massachusetts business (...) while advancing innovation in toxics use reduction and management."

36. See P. Edwards, "Confidentiality in Environmental Auditing" (1990) 1 J. of Environmental L. and Practice 1.

37. Ministry of Environment, New Directions for Regulating Contaminated Sites (January 1991).

38. S.B.C. 1980, c. 28, section 7.

39. Draft amendments to Policy Manual.

40. See T. Schrecker, Political Economy of Environmental Hazards, (Ottawa: Law Reform Commission of Canada, 1984).

41. Project 88, Harnessing Market Forces to Protect our Environment, 1988. (Washington, D.C.) (an unpublished study sponsored by Senators T. Wirth and J. Heinz), at pages 83-90.

42. For an excellent analysis of these concepts, see M. Stone, Pricing Pollution: Revising British Columbia's Waste Management Discharge Permit Fees (Environmental Protection Division, August, 1990).

43. See, Revising British Columbia's Waste Discharge Permit Fee System: A Discussion Paper (Program Planning and Evaluation Branch, EPD, 1991)

44. A much more extensive analysis, incorporating specific recommendations derived from other jurisdictions is found in M. Stone, Environmental Excise Taxes: Options for British Columbia (Environmental Protection Division, September, 1990).

45. R.S.B.C. 1979, c. 290, s.398 (q).

46. R.S.B.C. 1979, c. 400, s. 13 (r).

47. Purchasing Commission Amendment Act, 1990, S.B.C. 1990, c. 24 requires the Commission to "encourage and facilitate other transactions conducive to the economic and environmental well-being of the Province" (s.4), and other references to the environment contain merely permissive, non-binding language.

48. This account is derived from C. Sandborn, "Harnessing The Marketplace to reduce Hazardous Waste" (Montpellier, France, 1991), at page 14.

49. R.S.O. 1980, c. 141 , as amended.

50. Section 34.

51. See Sections 87(2) and 87(6).

We Want to Hear From You

New Approaches to Environmental Protection in British Columbia: A Legislation Discussion Paper takes a new look at environmental protection. The purpose of the discussion paper is to set out recommendations which will facilitate discussion leading to the development of new legislation.

A public consultation process is being developed to provide the opportunity to comment on the legislative proposals. As a first step, we invite your written comments on the proposals contained in the legislation discussion paper.

Further public consultation and meetings will be announced as they are scheduled.

If you would like to receive further information on upcoming public consultation processes, or if you would like additional copies of *New Approaches to Environmental Protection in British Columbia: A Legislation Discussion Paper*, please call the Legislation Consultation Project at 1-800-665-7120 or in Victoria call 356-6468.

Please take some time to provide us with your written input by completing this response form and returning it to us. If you wish to make more detailed written remarks, please attach additional pages.

In making a submission, please reference your comments to a recommendation number, and . . .

1. fill in your mailing address on the response form and **return it with your submission**. By providing us with your correct mailing address, your submission will be easier to identify and we will be able to keep you informed about future steps in the consultation process.

2. In order to include your comments in the Consultation Record, please ensure that your response sheet and your submission is faxed or mailed to our office by the deadline date of June 30, 1992.

   Please mail or deliver your submission to:

   Ministry of Environment, Lands and Parks

   Ministry Legislation Consultation Project

   4th Floor, 777 Broughton Street

   Victoria, B.C., V8V 1X4

   or fax it to 356-6464